

## **Abstract**

Sugar Salem High School is committed to meeting the ever-evolving demand for more technology in the classroom. Our vision of the New Generation Learning Environment includes 1:1 laptops, a ubiquitous wireless network, and customized professional development. Our goal is to identify and implement classroom technologies that will enhance student learning and provide access to the necessary tools to become college and career ready. Although we live in a rural community, we want our teachers, students, and parents to have equal access to the achievement and academic growth opportunities that 21<sup>st</sup> Century technologies can provide. SSHS is seeking to increase its dual credit course enrollment, Go-On percentages, ACT scores, ISAT scores, ECA scores, and adopt Common Core standards. We believe our Project ONE initiative will facilitate the accomplishment of these goals. Our staff is eager and willing to construct a Next Generation Learning Environment. We envision our teachers using technology to engage and broaden student perspectives in learning, to complete timely assessments, and to monitor each student's progress. For example, students could be assigned a writing topic that prompts them to visit a website, watch a news story, and write a response. Students could then combine and analyze their responses in a single GoogleDocs document before sharing it with the teacher. In another class, students could participate in a virtual dissection of a frog. After lunch, students could develop a 3-D model in SketchUp of the set for the upcoming school play. Then in PE, students could track their exercise and upload this data to the Nike+ website. The proposed program will also enable our students' education to extend beyond the traditional school day. Project ONE will provide so many opportunities for enhanced communication and collaboration. For example, students could receive daily notifications from the school website reminding them of their homework assignments, or they could collaborate over Skype for an upcoming video essay for Government class, or they could log onto Schoolnet to look at their latest quiz scores and complete a practice exam. SSHS's students will be encouraged to personalize their devices with pictures and music. We want these devices to become an integral part of our students' educational experience.

Our administrators, teachers, parents, students, and IT department are fully supportive of this project and committed to making it a sustainable, ongoing success. This high level of shared responsibility will insure that the program will be successful. We're confident the implementation of the project will reduce operational costs and increase efficiency while improving student achievement. We know our community members and tax-payers will embrace this project once they see the student enthusiasm and teaching and learning results produced by this endeavor. The affordable technology and PD associated with the program make it a scalable solution for the state of Idaho.

Project ONE is not just about putting a laptop in the hands of every student; it's about putting a laptop into the home to effect real learning transformation. The benefits this program will bring to our students, district, and community cannot be overstated. It's about providing everyone with equal access to the best educational opportunities available regardless of one's geographic location or socioeconomic status. With Project ONE, SSHS will open up new opportunities and access to knowledge *beyond* the walls of the classroom.

## Educational Needs and Goals

Sugar-Salem High School (SSHS) is a public high school (9-12) located in Sugar City in Madison County, Idaho. The school serves approximately 525 students. 91 percent of SSHS's students are Caucasian, 6 percent are Hispanic, 1 percent are Asian, 1 percent are Pacific Islander, and less than 1 percent are Native American. 47percent of SSHS's students qualify for a free or reduced lunch. An ambitious district, we are always striving for success. Although our students' performance data may appear satisfactory to some districts, we know our students can achieve at higher levels, and we recognize that there is room for improvement if they have access to the right tools and content. Specifically, our faculty members have targeted three critical areas of concern. These include our ACT scores, our End-of-Course Assessment (ECA) scores, and the percentage of SSHS students who attend college following graduation, also known as the Go-On percentage. The proposed program will address these concerns by transforming our students into self-directed, inquisitive learners.

Our first identified area of need concerns SSHS's students' ACT scores. The table to the right indicates a downward trend in our composite ACT scores. We've already begun to implement an onsite ACT Preparation course to help our students improve their skills.

Specifically, the assistance our students will need is across all four content areas of the ACT. The design of the new class will include instruction that is differentiated to the specific areas of need for each student. While we have not yet identified the specific source we will use, online ACT preparation such as that offered at [actstudent.org](http://actstudent.org) would greatly benefit our students. The introduction of mobile devices with funds from this grant will also enable our students who can't fit the ACT Preparation class into their schedule to receive similar help in an instructor-guided online environment. Ultimately, our goal is to push our composite ACT average to a 23.

Year	Sugar-Salem	State Average
2008	21.6	21.5
2009	22.1	21.6
2010	22.4	21.8
2011	22.1	21.7
2012	21.3	21.6

ECAs are the next target for improvement. When the Students Come First initiative first launched, we began to take a systematic approach to developing and administering ECAs to our students. As reflected by the table to the right, our ECA results haven't changed appreciably in the last two years. As such, we are working to improve our scores in both areas to 80 percent. Several applications will play an integral role in this process. The first tool we will utilize is Schoolnet. We have extensive experience using Schoolnet, but we hope to expand its usage and have it serve as the testing medium for all end-of-course and mid-term assessments for classes. Teachers using Schoolnet's detailed item analysis, long-term tracking, and standard-based assessments will be empowered by data. They will be able to administer an assessment, receive and review the results quickly, and use Schoolnet's detailed analytics tools to determine what percentage of the class has mastered a concept and identify which students need extra help.

	Math/ Science	English/ History
T1 2011-2012	76	75
T2 2011-2012	77.5	76
T3 2011-2012	76	78
T1 2012-2013	79	76
T2 2012-2013	75	75

Discovery Education will also assist us in this endeavor. Each content standard in Schoolnet is easily linked to Discovery Education resources. This linkage will enable teachers to direct students to specific resources in Discovery using their mobile devices in order to help them fully grasp misunderstood concepts.

One other area of concern that has been identified by faculty members is the diminishing percentage of SSHS's seniors who are electing to pursue postsecondary educational opportunities following graduation. Currently, only 54% of our seniors are enrolled in some type of college credit-earning course this year. This percentage is unacceptable for a district that is striving for success. Clearly a disconnect exists between SSHS's students and their perception of the relevance and value of a postsecondary degree. We are seeking this grant to address this problem and create a "college-going" culture within our school. Fostering this type of environment will require our teachers to collaborate effectively and work across the curriculum together. College-readiness indicators consistently show that students struggle with applying basic writing and computational skills to subject areas outside of English or math. To remedy this problem, SSHS's teachers will work together and have their students utilize programs like Google Docs on their mobile devices to foster collaborations among the various subjects. The district will also utilize Defined STEM as a collaborative tool. Defined STEM is a project-based, web-based program that SSHS's teachers will use as an idea bank for collaborative cross-curricular projects. For example, one Defined STEM project task has students create a marketing campaign for a private space shuttle company. An English teacher could have her students draft the verbiage for the campaign, an Art teacher could have his students design the marketing materials, and a Speech teacher could have her students create and deliver the presentation to a group of Physics students, who would then assess the campaign's strengths and weaknesses. This type of collaborative learning environment gives students the opportunity to develop the teamwork, critical thinking, creativity and communication skills that are in demand in higher-education and in the work-place.

We also plan to develop podcasts of our classes for students. Many universities already implement a similar system in which a professor will record her or his lectures, upload them, and allow students to download them as podcasts for review. Students who have to miss class for extra-curricular activities or illness would be able to stay current and not fall behind. Finally, students who are accustomed to using technology in high school gain the opportunity for a more self-directed education. IDLA and IEN courses are already widely available, and by effectively removing our current technology limitations, more students are likely to leave high school with college credit or even an associate's degree. Studies show that students with college credit are more likely to apply for post-secondary education and be successful once they get there. Our goal is to attain a Go-On percentage of 80 percent.

This program will level the playing field among our students as everyone will receive a device allowing us to meet the above outlined needs by providing us with greater tools for collaboration, for self-directed learning, and for teacher data processing. The requested mobile devices and digital content will provide our students with the opportunity for greater skill and knowledge development while still in high school. Those skills will ultimately be necessary to succeed in a competitive workforce.

## **Scope and Sequence**

The purpose of the proposed initiative is to create an optimal personalized learning environment and thriving digital community for SSHS's students and teachers. It will accomplish this task through the implementation of a robust 1:1 initiative that includes laptops for every SSHS student, an assortment of digital tools, and customized professional development for SSHS's teachers and administrators.

Planning - With any new program, it is necessary to designate leaders who will serve as the primary drivers of change. SSHS's project leaders include: Jared Jenks, Principal; Teachers-Sean Edwards, Darla Arnold, and Jared Gee. Their responsibilities are outlined in the chart below. The group's decision to seek funding for laptops for every SSHS student is supported by the findings made by the organization Project Red. According to a Project Red study, schools employing a 1:1 student-computer ratio and key implementation factors outperform other schools and reveal significant opportunities for improving education return on investments (ROI) by transforming teaching and learning. SSHS is seeking to replicate these results and improve its student achievement by properly implementing and supporting the proposed initiative. The above-listed team members will participate in a number of planning sessions beginning in July 2013, where they will work together to complete such tasks as scheduling in-service days for SSHS's faculty members, creating a train-the-trainer module, scheduling and creating content for student and parent orientations, and identifying key leaders among SSHS's staff.

Involvement- Each participant will be assigned certain roles and obligations within the program. SSHS's administrators will coordinate staff trainings, evaluations, and community engagement meetings throughout the school year. Our teachers will be responsible for providing seamless integration of devices and keeping students on task utilizing digital learning that is focused upon developing critical thinking and self-directed learning skills. Students will be charged with becoming good digital citizens and developing a personal stake in the digital learning process. Parents also will have key responsibilities, such as reinforcing proper use and care of the devices, and providing feedback and solutions to concerns that arise. SSHS's IT Department will be responsible for maintaining a robust infrastructure, improving filter technology, and providing same-day solutions for problems that arise.

Preparation- SSHS is taking the steps to ensure that its staff members, students, parents, and community members are adequately trained and fully supported throughout this endeavor. First, SSHS's teachers will receive ongoing professional development in the form of customized online webinars as part of the Intel Teach and Intel Transforming Learning programs. These training sessions will teach SSHS's teachers how to explore characteristics of engaged learners by effectively integrating authentic real world digital content into the curriculum, preparing for technology-enabled assessments, designing blended learning and effectively aligning classroom lessons with Common Core standards. These sessions will be recorded, archived and readily accessible to teachers and administrators, making them a vital component of SSHS's professional development sustainability plan. Second, the project leaders will identify those leaders and aspiring leaders within the school who've demonstrated an interest in technology and an aptitude for leadership, who have a progressive vision of the role of technology in the classroom, and/or have expressed a desire to push the envelope

academically. The role of these teachers will be to shift the paradigm of education to a student-centric model. These leaders will participate in train-the-trainer professional development sessions. This group of internal trainers will then administer training to their peers on an as-needed basis. Like education, professional development is not a one size fits all concept. Because SSHS anticipates that the primary obstacle will be initial reluctance from some of SSHS's staff members, SSHS will utilize its internal trainers to provide differentiated training to those teachers. Third, SSHS's teachers will form small professional learning communities within the school in which they can share best practices. By utilizing its own resources—its teachers—SSHS will create a sustainable, ongoing professional learning network within its school.

Implementation- Implementation will require adherence to the following timeline:

August 2013-ongoing	Jared Jenks	Staff Training and PD	The staff will attend two in-service trainings that will facilitate the creation of small development communities. The communities will meet twice a month over the project to share best practices.
September 2013-Week 1	1.Darla Arnold 2.Sean Edwards	Community Integration	Two community engagement meetings will be held at the school to discuss the project, solicit ideas, garner support from and forge partnerships with community members, and address concerns.
September-Week 2	Jared Gee	Student Orientation/Acceptable Use Policy	Students will be introduced to devices, sign device usage policy, and receive instruction as to proper care and use of device.
September-Week 3	Jared Jenks	Rollout Devices	Students assigned devices.

*Measurable goals/objectives/activities:*

1. Increase the percentage of students who are enrolled in a dual credit course by 2.5%
2. Attain a Go-On percentage of 80%.
3. Increase SSHS's students' composite ACT score by 3% after the program's first year and achieve an average 23 ACT composite score.
4. Achieve an 80% ECA score in both math and English.

Evaluation- Teacher team meetings will be held biweekly and will allow teachers to determine best practices. The team leaders from each content area will join the building technology committee on a monthly basis to report on and discuss successes and failures within the program. Surveys will be given once per term to evaluate student, parent, and teacher attitudes towards the program. Teams will use the observations of individual teachers on the successful uses of mobile devices in their classroom, administrative evaluations of teachers, student surveys, and parent surveys to make any necessary mid-course corrections. We will be using our ACT scores, ECA scores, Go-On percentage, and mid-term test scores to measure student achievement on a regular basis. The technology committee will meet with administrators once each term to determine whether all of the metrics are seeing adequate progress and to determine financial costs and benefits of the program. These meetings will provide accountability through six opportunities to evaluate the efficiency and efficacy of the proposed initiative in our school.

### **Sustainability and Scalability**

A fully integrated, effective 1:1 initiative requires a number of components beyond the devices. Software, professional development, technical support, and access and capacity must also be considered when undertaking such a project. After a thorough review, we determined that our students must have access to full-featured laptops that enable them to be content creators, rather than merely consumers. We need to bring our students to the center of learning and let them have a voice in their own learning process. This is why we hope to provide each student with a managed HP laptop computer. It's managed in the sense that it will be delivered to our students with a number of software and content programs pre-installed on the device. The device itself costs \$459 per student, and the associated service fees are \$170.62. Included in this service fee is synchronous, face-to-face, leader-led PD. Our teachers will also receive asynchronous, strategic PD training for our teachers. Research shows PD is an essential element in creating a successful one-to-one computing environment.

The overall cost savings this initiative will bring makes it a sustainable solution and one that can be replicated in all Idaho schools. SSHS estimates that it spends approximately \$18.40 per student per year on teacher and student printing and paper costs. With the proposed program, teachers will be able to digitalize all of their documents. Students will no longer have to print out research papers, presentations or assignments—they can simply email them to their teachers. Applying this same cost per high school student (90,000 students) analysis, a statewide 1:1 initiative would save the state \$1,656,000 in paper and printing fees. Additionally, the proposed program will greatly reduce or even eliminate the need for textbooks. SSHS spends approximately \$82.20 per student per year on textbooks. The shift from teacher-centered, textbook-driven methods to a student-centered learning approach will substantially reduce the need for textbooks. We are already reviewing open educational resources (OER) being used in California, and our English Department intends to create their own digital textbooks in the form of PDFs. From a statewide perspective, the average textbook costs approximately \$85, and there are approximately 90,000 Idaho high schools students. Reducing the reliance on printed textbooks will translate into significant cost-savings for the state.

Moreover, Project Red's report revealed that those schools and/or districts that implemented a fully-supported 1:1 initiative experienced a reduction in their end-of-course failure rates. SSHS had 90 end-of-course failures this past school year. Each course costs approximately \$423, so the total cost of a student failing and retaking a course for the school is \$846. Decreasing our failure rates will have a significant impact on the district's budget. Translated statewide, reducing the number of students failing their courses will have a tremendous impact on the state's economy. The ability to provide our students with more dual-credit opportunities via their devices will also increase the percentage of our students who elect to pursue and complete a postsecondary degree. Currently, only 57 percent our seniors will be attending some type of postsecondary educational institution next year. This is unfortunate as postsecondary attendance not only brings in more direct revenue for the state, but it also creates a stronger, more educated workforce, which subsequently strengthens the overall economy of the state.

From a capacity standpoint, the utilization of train-the-trainer leadership modules, PLCs, and archived video professional development trainings will enable us to provide

ongoing, sustainable professional development. This model will enable us to continually build leadership from within at no extra cost, which is very important and crucial given our rural location. By leveraging resources we already have—our teachers, we are creating a sustainable model that is scalable across the state. Other cost savings will come in the form of offsetting infrastructure expenses and reducing college remediation expenditures. The introduction of devices will eliminate the need for computer labs. Repurposing these labs as classrooms will produce a tremendous savings in new construction costs across the state as Idaho's Title 33 statute dictates the replacement value of school buildings to be \$81.45 per square foot. If the average computer lab is approximately 800 square feet, that is a reclaimed savings of \$65,176 per classroom. Because SSHS has two labs, that's a total reclaimed value of \$130,352. Additionally, although SSHS has a high graduation rate, recent data is revealing that Idaho's high school graduates aren't adequately prepared for a rigorous college curriculum. According to the Complete College Idaho Study conducted by the Idaho State Board of Education, 67 percent of Idaho high school graduates enrolled at 2-year schools need remediation and 26 percent of graduates enrolled at 4-year schools need remediation. This is a tremendous cost that can be reduced through a 1:1 initiative.

SSHS is fully committed to this project and are excited to see the transformations this program will bring to our community. We have a proven track record of success with new programs and for getting other schools on board with new initiatives. If awarded funding, we will provide the state with regular updates in terms of identified cost-savings. We know we can accomplish great things if given the opportunity to do so. We believe in Superintendent Luna's vision, and we are ready to be a model of what an effective 21<sup>st</sup> century school looks like in the state of Idaho. Because we are located in a poorer, more rural area of the state, we can envision the vast array of benefits a statewide 1:1 initiative would bring to all Idaho students, and we want to play a leadership role in making that happen. Although we feel it will be challenging to develop a complete sustainable solution in the given two-year window, we know that the cost-savings outlined above will eventually surpass the costs of implementation. We are also optimistic that the state's previous statewide implementation efforts will be revisited once the successes of the proposed program become apparent to all Idaho residents. While SSHS can't absolutely guarantee that it will be able to sustain the initiative beyond two years, we are passionate about the project and will strive to apportion a percentage of our operating budget toward sustaining it following the conclusion of the grant. We intend to form a sustainability committee to monitor the cost-savings associated with the program and to formulate an ongoing sustainability plan in conjunction with our Business Manager. As demonstrated by the attached letter of support, we already have buy-in for the project from our Parent Advisory Committee. We intend to provide our community with regular updates on the program's progress to ensure we retain their support. SSHS is confident that once our own community members as well as Idaho taxpayers see the amazing results the program produces, they will jump on board and be more than happy to support a program that provides Idaho's children with such an innovative educational opportunity.

## **Budget Narrative**

**Professional Development:**HP has seen firsthand how critical effective professional development (PD) is in making the difference between a large technology purchase and a transformational instructional technology initiative. The PD plan has a rich offering of services including face-to-face workshops, leader-facilitated online classes, online courses, professional learning communities and a broad array of online resources all designed to provide many delivery options to reach all stakeholders.

### Face-to-Face (F2F) and Leader-Led

*Hewlett Packard 1:1 Integration Training (2-Day Workshop):* This F2F training inspires educators to leverage one to one computing, on a windows platform, to explore new models for teaching and learning, to build and assess the skills that their students will need to thrive in a Digital Age and to connect their students to the world beyond the classroom.

*Intel Transforming Learning Student Engagement with One to One:* This online course will be delivered synchronously to SSHS's teachers twice during the life of the grant. In this 5 module facilitated course, participants will explore characteristics of engaged learners by taking advantage of the authentic, real-world tools in a 1:1 learning environment.

*ClassLink:* This leader-led course focuses on using LaunchPad in the classroom.

### Online Courses

A rich array of online, self-paced courses are available for anytime, anywhere PD including: Intel Teach Elements series, and professional learning community (PLC) network, Common Sense Media digital citizenship, Atomic Learning integration and software application PD, and Microsoft Digital Literacy and Partners in Learning resources and PLC networks.

**Managed Service:**One of the most difficult aspects of any 1:1 is the implementation and management of all of the devices. This robust bundled service package alleviates this headache. This managed service approach extends and enhances the ability of technology and administrative staff to better serve the students with the increase in technological demands. This allows the school to leverage the expertise of support staff to share and employ best practices based on national markets. It includes Asset Management, Patch/Antivirus Management, Custom Help Desk, Image Management, and Warranty Protection.

**Device:**SSHS intends to purchase 4440s notebook computers for its teachers and students. The notebooks have a 14" Display, Intel i3-3120M Processor, Intel HD 4000 Graphics Card, 4GB RAM, 320GB Hard Drive, DVD RW Drive for teachers, and over 7 hours of battery life. Each computer comes with a carrying case.

**Software Suite:**Windows 7, and licensed for Windows 9, Microsoft Office 2013/Office365, Entire Microsoft Learning Suite, ClassLink Launchpad-Delivers a personal cloud desktop and single sign-on to all web-enabled apps, tools, and content - provides a Learning Management System, Cloud Storage and Classroom Management capabilities

**Defined STEM:**Defined STEM is a project-based, web-based curricular resource tool for teachers and students. Its common core standard aligned performance tasks, literacy tasks, and real-world videos enable students to see the relevance of K-12 topics through real-world careers and themes.

## Project Budget

Expenditure/Category	Cost	Number of Participants	Purchase Date	Total Cost
Managed Integration Service and Professional Development Fee	\$170.62 per device per year	525 Students 30 Faculty Members	Year 1: Last week of July 2013  Year 2 renewal: July 2013	\$189,388.20
Customized Professional Development-Intel Teach and Transforming Learning	\$100 per teacher	30 Teachers	Year 1: First week of August 2013  Year 2: August 2014	\$6,000
Hardware/software bundle <ul style="list-style-type: none"> <li>• HP 4440s Notebook Computer</li> <li>• Protective Carrying Case</li> <li>• MS Office License</li> <li>• ClassLink Launch Pad License</li> </ul>	\$459 per student device  \$514 per teacher device	525 Students  30 Teachers	Year 1: First week of August 2013	\$256,395
Digital Content <ul style="list-style-type: none"> <li>• Defined STEM</li> </ul>	\$1500 per year for entire building	All students and teachers	Year 1: Second week of September 2013  Year 2 renewal: September 2014	\$3,000
<b>Project Total/Requested Funds</b>				<b>\$454,783.20</b>